

## ABSTRACT OF THE DISCLOSURE

5 In a fuel cell assembly, a passive gas spring is disposed between the  
stack and the supporting structure for maintaining compressive force on the stack  
and manifold seal. As variation in temperature of the assembly and structure  
causes dimensional changes therein, the pressure within the gas spring also  
changes accordingly. The gas spring is provided with inlet and outlet check  
10 valves, the outlet check valve opening to expel air when internal spring pressure  
reaches a predetermined upper pressure limit, and the inlet check valve opening  
to admit air when the internal spring pressure falls below a predetermined lower  
pressure limit. In a currently preferred embodiment, the outlet check valve allows  
exit of gas from the gas spring at pressures exceeding 5 psig, to prevent rupture  
15 of the gas spring, and the inlet check valve allows entrance of gas into the gas  
spring as the spring cools following use.